





MOFFET, LARSON & JOHNSON, INC.  
CONSULTING TELECOMMUNICATIONS ENGINEERS

Two Skyline Place  
Suite 800

## ENGINEERING REPORT

5203 Leesburg Pike  
Falls Church, Virginia 22041

Columbia Union College Broadcasting, Inc.  
Takoma Park, Maryland  
WGTS-FM

TABLE 4 (PAGE 1 OF 2)

DISTANCE TO PROPOSED CONTOURS

Maximum Effective Radiated Power 25.00 kW 13.98 dBk  
Non-Directional Antenna  
Antenna Radiation Center: 217. Meters AMSL

Bear Deg True	AE Meters	HAAT Meters	Ant Gain dB	ERP dBk	ERP kW	Distances to Contours (km) F(50,50) 60. dBu
0.0	74	143	0.00	13.98	25.00	45.1
32.4	85	132Z	0.00	13.98	25.00	43.6
39.1	83	134Z	0.00	13.98	25.00	43.9
45.0	80	137	0.00	13.98	25.00	44.3
90.0	19	198	0.00	13.98	25.00	50.9
135.0	24	193	0.00	13.98	25.00	50.5
180.0	55	162	0.00	13.98	25.00	47.5
225.0	86	131	0.00	13.98	25.00	43.5
229.6	90	127Z	0.00	13.98	25.00	42.9
270.0	117	100	0.00	13.98	25.00	39.1
315.0	80	137	0.00	13.98	25.00	44.3
Average	67	150				

Notes:

Z Not Included in Average Elevation

Columbia Union College Broadcasting, Inc.  
Takoma Park, Maryland  
WGTS-FMTABLE 4 (PAGE 2 OF 2)DISTANCE TO PROPOSED CONTOURS

Maximum Effective Radiated Power 25.00 kW 13.98 dBk  
 Non-Directional Antenna  
 Antenna Radiation Center: 217. Meters AMSL

Bear Deg True	AE Meters	HAAT Meters	Ant Gain dB	ERP dBk	ERP kW	Distances to Contours (km)		
						F(50,10) 86. dBu	F(50,10) 80. dBu	F(50,10) 40. dBu
0.0	74	143	0.00	13.98	25.00	11.0	15.7	121.0
32.4	85	132Z	0.00	13.98	25.00	10.5	15.0	119.2
39.1	83	134Z	0.00	13.98	25.00	10.6	15.1	119.5
45.0	80	137	0.00	13.98	25.00	10.7	15.3	120.0
90.0	19	198	0.00	13.98	25.00	13.1	19.2	128.4
135.0	24	193	0.00	13.98	25.00	12.9	18.9	127.8
180.0	55	162	0.00	13.98	25.00	11.8	17.1	123.9
225.0	86	131	0.00	13.98	25.00	10.5	14.9	119.0
229.6	90	127Z	0.00	13.98	25.00	10.3	14.7	118.3
270.0	117	100	0.00	13.98	25.00	9.2	13.0	113.6
315.0	80	137	0.00	13.98	25.00	10.7	15.3	120.0
-----								
Average	67	150						

## Notes:

Z Not Included in Average Elevation



**MOFFET, LARSON & JOHNSON, INC.**  
CONSULTING TELECOMMUNICATIONS ENGINEERS

Two Skyline Place  
Suite 800

## ENGINEERING REPORT

5203 Leesburg Pike  
Falls Church, Virginia 22041

Columbia Union College Broadcasting, Inc.  
Takoma Park, Maryland  
WGTS-FM

### EXHIBIT 7-A

#### SHORT SPACING TO COMMERCIAL STATION WERQ(FM)

Table 5 is an allocation study for Channel 220B at the present WGTS-FM site. As shown on Table 5, commercial station WERQ(FM), Baltimore, Maryland, operating on Channel 222B is presently short-space to the present WGTS-FM location. The proposed location will decrease the short-spacing from 26.0 kilometers to 10.3 kilometers. Exhibit 7-B shows that there is no overlap of the F(50,10) 80 dBu interfering contour of the proposal with the F(50,50) 60 dBu contour of WERQ.

Moffet, Larson, & Johnson, Inc.

TABLE 5

Date : 6/93

pos 20Name : PRESENT WGTS-FM - TAKOMA PARK, MD

Channel : 220B

Coordinates : N 38 59 12.0 W 77 0 4.0

Separations : FM Zone 1 - Educational

Call	City	&	State	Stat	File - number	Chan	ERP	HAAT	Zn	Latitude	Longitude	Bear	Dist	Req'd	Clear	Notes
--- kilometers ---																
WVUD	NEWARK		DE	LIC	BLED 830421AD	*217A	1.00	137	1	39 41 26.0	75 45 23.0	53.4	132.75	54.4*	78.35	
WTRM	WINCHESTER		VA	LIC	BLED 910508KA	*217B1	6.10	1348	1	39 10 59.0	78 23 23.0	280.8	122.11	56.2*	65.95	Comment
WBJC	BALTIMORE		MD	LIC	BLED 781115AH	*218B	50.0	497	1	39 23 11.0	76 43 52.0	27.5	50.13	71.9*	-21.80	SHORT
WRTX	DOVER		DE	CP	BPED 900116MF	*219A	0.71	279	2	39 11 30.0	75 33 46.0	79.1	126.51	102.2*	24.31	Comment
WMPH	WILMINGTON		DE	LIC	BLED 830321AX	*219A	0.10	140	1	39 46 23.0	75 30 25.0	55.3	155.55	102.2*	53.36	
WFWM	FROSTBURG		MD	LIC	BLED 890123KA	*219A	0.16	1424	1	39 34 54.0	78 53 53.0	292.7	176.50	102.2*	74.30	
WIXQ	MILLERSVILLE		PA	LIC	BLED 810731AE	*219A	0.13	69	1	39 59 53.0	76 21 20.0	26.0	125.27	102.2*	23.08	
WJAZ	SUMMERDALE		PA	LIC	BLED 910109KA	*219A	0.14	689	1	40 18 20.0	77 0 27.0	359.8	146.43	102.2*	44.24	
NEW	WEST CHESTER		PA	APPM	BPED 920203ME	*219A	0.10	108	1	39 57 2.0	75 35 58.0	47.9	161.25	102.2*	59.05	Comment
NEW	WEST CHESTER		PA	APP	BPED 870708	*219A	0.25	103	1	39 56 59.0	75 36 .0	47.9	161.15	102.2*	58.96	
WEMC	HARRISONBURG		VA	LIC	BLED 821012AZ	*219A	0.10	205	1	38 28 16.0	78 52 57.0	251.2	173.32	102.2*	71.13	
WEMC	HARRISONBURG		VA	CP	BPED 900808MC	*219A	1.84	190	1	38 28 20.0	78 52 57.0	251.3	173.28	102.2*	71.09	
WGTSFM	TAKOMA PARK		MD	LIC	BLED 717	*220B	29.5	165	1	38 59 12.0	77 0 4.0	.0	.00	189.9*	-189.90	SHORT
NEW	CHARLOTTESVILLE		VA	APPM	BPED 921208ME	*220A	0.40	945	1	37 58 57.0	78 29 .0	229.6	170.74	161.9*	8.84	CLOSE c
NEW	FENWICK ISLAND		DE	CP	BPH 850712ZI	221A	3.00	328	1	38 26 15.0	75 8 46.0	110.2	172.48	113.0	59.48	Comment
WVLT	VINELAND		NJ	LIC	BLH 900612KA	221A	3.00	328	1	39 29 53.0	75 4 31.0	70.5	175.69	113.0	62.69	Comment
WGLL	MERCERSBURG		PA	LIC	BLH 7008	221A	3.30	295	1	39 48 34.0	77 48 22.0	323.2	114.68	113.0	1.68	CLOSE c
WGLL	MERCERSBURG		PA	CP	BPH 900305IK	221A	2.70	466	1	39 48 34.0	77 48 22.0	323.2	114.68	113.0	1.68	CLOSE c
WCTX	PALMYRA		PA	LIC	BLH 870722KA	221A	3.30	300	1	40 19 35.0	76 36 33.0	12.6	152.50	113.0	39.50	Comment
WDYL	CHESTER		VA	LIC	BLH 880520KB	221A	3.00	328	1	37 22 58.0	77 25 41.0	192.0	181.92	113.0	68.92	Comment
WCDX	MECHANICSVILLE		VA	CP	BPH 920728IE	221B1	4.56	771	1	37 36 52.0	77 30 56.0	196.6	158.82	145.0	13.82	CLOSE c
WVSY	RUCKERSVILLE		VA	LIC	BLH 900404KB	221A	1.40	482	1	38 13 6.0	78 22 3.0	234.7	146.43	113.0	33.43	Comment
WVSY	RUCKERSVILLE		VA	CP	BPH 920710ID	221A	6.00	222	1	38 18 5.0	78 31 57.0	240.7	153.50	113.0	40.50	
WERQ	BALTIMORE		MD	LIC	BLH 891228KA	222B	37.0	570	1	39 20 20.0	76 40 2.0	36.2	48.60	74.0	-25.40	SHORT
WINCFM	WINCHESTER		VA	LIC	BLH 6003	223B	22.0	1430	1	38 57 19.0	78 1 28.0	268.1	88.75	74.0	14.75	CLOSE c
WINC-FM	WINCHESTER		VA	CPM	BPH 890206IG	223B	22.2	1424	1	38 57 20.5	78 1 28.0	268.1	88.75	74.0	14.75	CLOSE c
WXYV	BALTIMORE		MD	LIC	BLH 890117KE	274B	50.0	437	1	39 23 11.0	76 43 52.0	27.5	50.13	20.0	30.13	



**MOFFET, LARSON & JOHNSON, INC.**  
CONSULTING TELECOMMUNICATIONS ENGINEERS

Two Skyline Place  
Suite 800

## ENGINEERING REPORT

5203 Leesburg Pike  
Falls Church, Virginia 22041

Columbia Union College Broadcasting, Inc.  
Takoma Park, Maryland  
WGTS-FM

### EXHIBIT 8-A

#### FURTHER RESPONSE TO PART 24 OF FCC FORM 340

Section 73.525(a)(1) of the FCC Rules defines a television Channel 6 Station affected by a non-commercial FM (NCE-FM) Channel 220 proposal as any station within 154 kilometers of the NCE-FM.

Table 6 lists all of the TV Channel 6 stations within 154 kilometers. The proposed site falls outside the Grade B (47 dBu) contour of the station listed on Table 6. FM Channel 220 is required to provide a 39.0 dB interference ratio. Therefore, a proposed FM interference contour of 86.0 dBu was employed towards the pertinent TV Channel 6 station.

Attached, as Exhibit 8-B is a map which demonstrates the proposed 86.0 dBu contour will not overlap the TV Channel 6 47 dbu contour.

Table 4 is a tabulation of distances for the proposed operation used in constructing Exhibit 8-B. The distances to the 47 dBu contour for the TV Channel 6 station is on file with the FCC.

Moffet, Larson & Johnson, Inc.

TABLE 6

Date: 6/93

Study Name : WGTS-FM - TAKOMA PARK, MD

TV Stations within : 154 km

Coordinates : N 38 53 44.0 W 77 8 4.0

Call	Location	Status	Chan	File Number	ERP	HAAT Zn	Latitude	Longitude	Bear	Dist	Owner/Applicant
WTVRTV	RICHMOND, VA	LIC	6+	BLCT 193	100.	840 1	37 34 0.0	77 28 36.0	191.54	150.52	ROY H PARK BCTING



MOFFET, LARSON & JOHNSON, INC.  
CONSULTING TELECOMMUNICATIONS ENGINEERS

Two Skyline Place  
Suite 800

## ENGINEERING REPORT

5203 Leesburg Pike  
Falls Church, Virginia 22041

Columbia Union College Broadcasting, Inc.  
Takoma Park, Maryland  
WGTS-FM

### EXHIBIT 9-A

#### FURTHER RESPONSE TO PART 20 OF FCC FORM 340

This proposal is categorically excluded from the environmental processing since it does not involve a site location specified under Section 1.1307(a)(1)-(8) of the Commission's Rules.

Exhibit 9-B tabulates the calculation of the percent of allow power density from the existing and authorized antennas along with the proposed antenna at 2 meters above the tower base, employing the maximum radiation of each operation, and a relative field of 1.0. As shown in Exhibit 9-B, the power density at ground level will be less than that allowed. Therefore, the electromagnetic radiation from this proposed operation will be below the standards set in the Human Exposure Guide (ANSI C95.1, 1982) in locations accessible to the public.

The antenna input power will be reduced or shut off as necessary when authorized persons climb the tower to ensure that these persons are not subjected to electromagnetic radiation that exceeds the ANSI limit. An agreement to this effect has been agreed upon by the site users.

The existing structure is also used as the AM radiator for station WABS(AM). A fence has been constructed to prevent access to the tower and appropriate warning signs are in place on the tower.





MOFFET, LARSON & JOHNSON, INC.  
CONSULTING TELECOMMUNICATIONS ENGINEERS

Two Skyline Place  
Suite 800

## ENGINEERING REPORT

5203 Leesburg Pike  
Falls Church, Virginia 22041

Columbia Union College Broadcasting, Inc.  
Takoma Park, Maryland  
WGTS-FM

### EXHIBIT 9-B (Page 1 of 2)

### CALCULATION OF PERCENT OF ALLOWED POWER DENSITY

#### Antenna # 1 - FM Broadcast

ID : WJZE(FM) -WASHINGTON, DC  
-----  
Frequency : 100.3 Mhz Rad Cent : 124.0 meters AG  
Power  
Hori Pol : 36.000 kW Bearing : 0.0 degrees  
Vert Pol : 36.000 Distance : 0.0 meters

#### Antenna # 2 - FM Broadcast

ID : WAVA(FM) -ARLINGTON, VA  
-----  
Frequency : 105.1 Mhz Rad Cent : 114.0 meters AG  
Power  
Hori Pol : 41.000 kW Bearing : 0.0 degrees  
Vert Pol : 41.000 Distance : 0.0 meters

#### Antenna # 3 - FM Broadcast

ID : WGTS-FM TAKOMA PARK, MD  
-----  
Frequency : 91.9 Mhz Rad Cent : 98.0 meters AG  
Power  
Hori Pol : 25.000 kW Bearing : 0.0 degrees  
Vert Pol : 25.000 Distance : 0.0 meters



MOFFET, LARSON & JOHNSON, INC.  
CONSULTING TELECOMMUNICATIONS ENGINEERS

Two Skyline Place  
Suite 800

## ENGINEERING REPORT

5203 Leesburg Pike  
Falls Church, Virginia 22041

Columbia Union College Broadcasting, Inc.  
Takoma Park, Maryland  
WGTS-FM

### EXHIBIT 9-B (Page 2 of 2)

### CALCULATION OF PERCENT OF ALLOWED POWER DENSITY

#### Point Data

Point #	Bearing	Distance - meters -	Elevation - meters AG -	% of Allowed Power Density
1	0.00	0.00	2.00	56.13

#### Power Density Calculations at Point # 1

Antenna	Bearing to Point degrees	Slant Dist to Point meters	Dep Ang to Point degrees	Plane Relative Field Hor	Plane Relative Field Vert	Effec- tive Power Kw	Allowed Power Density mW/cm*cm	Power Density mW/cm*cm	Percent of Allowed
1	0.0	122.0	-90.00	1.000	1.000	72.000	1.000	0.1616	16.162
2	0.0	112.0	-90.00	1.000	1.000	82.000	1.000	0.2184	21.840
3	0.0	96.0	-90.00	1.000	1.000	50.000	1.000	0.1813	18.126
Total of Allowed Power Density									56.128

Columbia Union College Broadcasting, Inc.  
Takoma Park, Maryland  
WGTS-FM

A F F I D A V I T


COUNTY OF FAIRFAX )  
 ) SS:  
COMMONWEALTH OF VIRGINIA )

WILLIAM A. HAMMAN, being duly sworn upon oath deposes and says:

That he is employed as a Project Engineer by the firm of Moffet, Larson & Johnson, Inc., consulting telecommunications engineers;

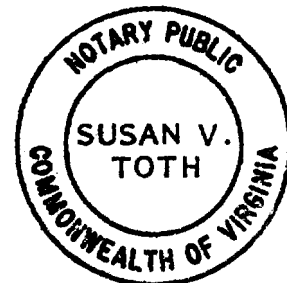
That this firm has been retained by Columbia Union College Broadcasting, Inc. to prepare this engineering statement;

That he has either prepared or directly supervised the preparation of all technical information contained in this engineering statement; and that the facts stated in this engineering statement are true of his knowledge, except as to such statements as are herein stated to be on information and belief, and as to such statements he believes them to be true.

  
William A. Hamman

Subscribed and sworn to before me this 8th day of June, 1993.

Susan V. Voth  
Notary Public



My Comm. Exps.  
July 31, 1996

Columbia Union College Broadcasting, Inc.  
Takoma Park, Maryland  
WGTS-FM

A F F I D A V I T

COUNTY OF FAIRFAX                    )  
  ) SS:  
COMMONWEALTH OF VIRGINIA )

JOHN C. KEAN, being duly sworn upon oath deposes and says:

That he is employed as a Senior Engineer by the firm of Moffet, Larson & Johnson, Inc., consulting telecommunications engineers;

That this firm has been retained by Columbia Union College Broadcasting, Inc. to prepare this engineering statement;

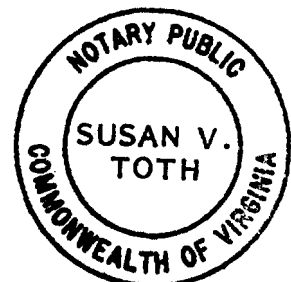
That he has either prepared or directly supervised the preparation of all technical information contained in this engineering statement; and that the facts stated in this engineering statement are true of his knowledge, except as to such statements as are herein stated to be on information and belief, and as to such statements he believes them to be true.

John C. Kean

John C. Kean

Subscribed and sworn to before me this 8th day of June, 1993.

Susan V. Toth  
Notary Public



My Comm. Exps.  
July 31, 1996

## SECTION VI - EQUAL EMPLOYMENT OPPORTUNITY PROGRAM

7. Does the applicant propose to employ five or more full-time employees?

Not applicable

☐ Yes ☐ No

If Yes, the applicant must include an EEO program called for in the separate Broadcast Equal Employment Opportunity Program Report (FCC 396-A).

## SECTION VII - CERTIFICATION

1. Has or will the applicant comply with the public notice requirements of 47 C.F.R. Section 73.3580?

☒ Yes ☐ No

2. By checking Yes, the applicant certifies that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

☒ Yes ☐ No

The APPLICANT hereby waives any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations, and that all exhibits are a material part hereof and incorporated herein.

The APPLICANT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination on any other application with which it may be in conflict.

In accordance with 47 C.F.R. Section 1.65, the APPLICANT has a continuing obligation to advise the Commission, through amendments, of any substantial and significant changes in information furnished.

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).**

I certify that the statements in this application are true and correct to the best of my knowledge and belief, and are made in good faith.

Name of Applicant Columbia Union College Broadcasting, Inc.	Title Treasurer
Signature Donald A. Wheeler	Date July 19, 1993

### FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of this application is in the public interest. In reaching that determination, or for law enforcement purposes, it may be necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, processing of the application may be delayed or the application may be returned without action pursuant to the Commission's rules. Your response is required to obtain the requested authority.

Public reporting burden for this collection of information is estimated to vary from 78 to 302 hours 20 minutes with an average of 171 hours 36 minutes per response. These estimates include the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Information Resources Branch, Room 416, Paperwork Reduction Project, Washington, D.C. 20554, and to the Office of Management and Budget, Paperwork Reduction Project (3060-0034), Washington, D.C. 20503.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.